

REMARKS

This is a response to the Office Action mailed December 11, 2006. The Cross-Reference to Related Applications recitation has been amended to include the U.S. serial numbers of the cited applications and claim 1 has been amended to correct a spelling error. Claims 1-17 are pending and have been examined. Consideration of the following remarks is respectfully requested.

Claims 1-15 are rejected under 35 U.S.C. § 103(a), as being unpatentable over *Stroud* (U.S. Patent No. 1,416,995) in view of *Brown et al.* (DE 2811536). The grounds for the rejection are set forth on pages 2 and 3 of the Office Action. Applicants respectfully traverse the rejection based upon the remarks that follow.

The present invention is directed to a cyclone dust separating apparatus of a vacuum cleaner having a first cyclone (111) and a plurality of second cyclones (113). A cover (190) is mounted on the upper portions of the cyclones to allow entrance and exit of the cyclones. The second cyclones are disposed about the first cyclone and collected dust is collected in different portions of the dust collecting unit (165).

Stroud is directed to a dust collection system that uses multiple cyclones. Similar art was discussed in the Background of Invention section of the present specification. The Office Action acknowledges that *Stroud* fails to teach a cover disposed on an upper portion of the cyclones, where the cover includes a guide formed at a lower center to guide discharged air from the first cyclone to the second cyclones. Because of that deficiency, the Office Action also cites *Brown et al.*

Brown et al. is directed to a cleaner package that receives materials to be separated having an inlet chamber and an outlet chamber. The two chambers are connected by multiple centrifugal cleaning units (12). The slurry materials are drawn into the unit through a tube (60) and deflected to the centrifugal cleaning units through a chamber (47) via a deflector

(104). The slurry entering the chamber (47) spreads along the dished bottom wall (90) across the openings of the tubes (35) for entry into the centrifugal cleaning units. Applicants note that while the package described in *Brown et al.* does describe multiple centrifugal cleaning units, there is no portion wherein slurry is introduced from one unit to another. The cover having the deflector does not deflect slurry from a cyclone unit, but merely deflects slurry introduced from outside the package.

Applicants respectfully assert that one of ordinary skill in the art would not have been motivated to combine the disclosures of *Stroud* and *Brown et al.* as suggested by the Examiner. First, with respect to *Stroud*, the air inlets (11) to the secondary dust collecting chambers are configured so that they “effect the swirling of the air in the secondary collectors” (column 2, lines 94-95). Replacing the air inlets with an inlet dispersion system, like that described in *Brown et al.*, would not allow the secondary dust collecting chambers to function as they were intended. In other words, air introduced in the fashion disclosed in *Brown et al.*, would not allow for the centrifugal cleaning effect to be realized in the design of *Stroud*.

Secondly, the cover in *Brown et al.* redistributes air from the outside and does not transfer air from one cyclone unit to another cyclone unit. If the references were somehow combined, it would be more likely that the redistribution element of the cover in *Brown et al.* would be implemented on the air intake portion of the cleaning unit in *Stroud*.

Lastly, the motivation proffered for the combination of *Stroud* and *Brown et al.* is inadequate, in that it would not “provide for a smooth airflow transition between the first and second cyclones of *Stroud*.” The airflow process in *Stroud* is already smooth and effectuates the operation of the secondary collectors. The provision of the cover from *Brown et al.* into the system of *Stroud* would do the opposite of providing a smooth airflow transition because

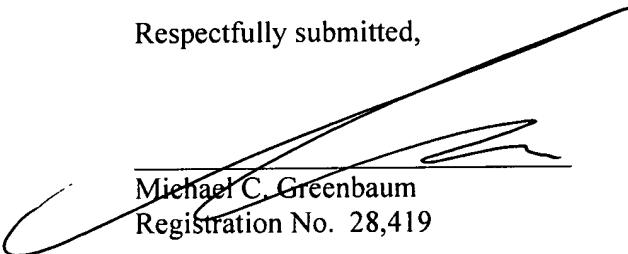
the cap (13) would need to be removed from the inner pipe (6), and that would change the functionality and the efficiency of the cleaning ability of the dust collector.

As such, Applicants respectfully assert that one of ordinary skill in the art would not have been motivated to combine the disclosures of *Stroud* and *Brown et al.* and that the rejection of claims 1-15 is improper because a *prima facia* case of obviousness has not been made. Applicants respectfully request reconsideration and allowance of all claims.

Applicants submit that the pending rejections are overcome by the amendments and remarks herein. Reconsideration of the rejections is requested on that basis, and a Notice of Allowance is earnestly solicited. If a telephone or personal conference would expedite prosecution, the Examiner is invited to contact the undersigned, who will cooperate appropriately to advance the case.

Please charge any shortage or credit any overpayment of fees to BLANK ROME LLP, Deposit Account No. 23-2185 (116511-00132). Any fees due are authorized above.

Respectfully submitted,



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